

IN THE CLAIMS:

1-4. (Cancelled)

5. (Previously Presented) A method comprising:

determining that fibrillation is occurring in a heart of a person;

defibrillating the heart without applying shock pulses by:

applying electrical pulses to the heart at a rate greater than about 10 Hz, with a peak power that is less than about 100 W, wherein applying the pulses comprises applying a pulse having an amplitude less than about 50 mA, and

terminating the electrical pulses, whereby the steps of applying and terminating the electrical pulses effectuate defibrillation of the heart; and

sensing motion of the heart, wherein applying the pulses comprises modifying a characteristic of at least some of the pulses applied to the heart responsive to the sensed motion.

6. (Previously Presented) A method comprising:

determining that fibrillation is occurring in a heart of a person;

defibrillating the heart without applying shock pulses by:

applying electrical pulses to the heart at a rate greater than about 10 Hz, with a peak power that is less than about 100 W, wherein applying the pulses comprises applying a pulse having an amplitude less than about 50 mA, and

terminating the electrical pulses, whereby the steps of applying and terminating the electrical pulses effectuate defibrillation of the heart; and

inhibiting propagation of an activation wave in the heart while applying the electrical pulses, by applying a fencing signal to the heart.

7. (Cancelled)

8. (Previously Presented) A method comprising:

determining that fibrillation is occurring in a heart of a person;

defibrillating the heart without applying shock pulses by:

applying electrical pulses to the heart at a rate greater than about 10 Hz, with a peak power that is less than about 100 W, wherein applying the pulses comprises applying a pulse having an amplitude less than about 50 mA, and

terminating the electrical pulses, whereby the steps of applying and terminating the electrical pulses effectuate defibrillation of the heart; and

pacing the heart at approximately 1 Hz while applying the electrical pulses at the rate greater than about 10 Hz.

9-11. (Cancelled)

12. (Previously Presented) A method comprising:

determining that fibrillation is occurring in a heart of a person; and

defibrillating the heart without applying shock pulses by:

applying electrical pulses to the heart at a rate greater than about 10 Hz, with a peak power that is less than about 100 W, wherein applying the pulses comprises applying a pulse having an amplitude less than about 50 mA, and

terminating the electrical pulses, whereby the steps of applying and terminating the electrical pulses effectuate defibrillation of the heart,

wherein applying the pulses comprises applying respective signals at a plurality of sites on the heart; and

wherein applying the signals comprises applying a first waveform at a first one of the sites and applying a second waveform, which differs from the first waveform, at a second one of the sites.

13. (Cancelled)

14. (Previously Presented) A method comprising:

determining that fibrillation is occurring in a heart of a person; and

defibrillating the heart without applying shock pulses by:

applying electrical pulses to the heart at a rate greater than about 10 Hz, with a peak power that is less than about 100 W, wherein applying the pulses comprises applying a pulse having an amplitude less than about 50 mA, and

terminating the electrical pulses, whereby the steps of applying and terminating the electrical pulses effectuate defibrillation of the heart,

wherein applying the pulses comprises inducing depolarization in at least a region of the heart by applying the pulses; and

wherein applying the pulses comprises inducing a depolarization of substantially all excitable contractile tissue of the heart by applying the pulses.

15-33. (Cancelled)

34. (Previously Presented) A method comprising:

determining that ventricular fibrillation is occurring in a heart of a person; and

defibrillating the heart without applying shock pulses by:

applying an electrical signal to the heart with a total energy of no more than about 1 joule, and

terminating the electrical signal, whereby the steps of applying and terminating the electrical signal effectuate defibrillation of the heart,

wherein applying the signal comprises applying the signal in two or more bursts of signal application.

35. (Previously Presented) A method comprising:

determining that ventricular fibrillation is occurring in a heart of a person;

defibrillating the heart without applying shock pulses by:

applying an electrical signal to the heart with a total energy of no more than about 1 joule, and

terminating the electrical signal, whereby the steps of applying and terminating the electrical signal effectuate defibrillation of the heart; and

pacing the heart at approximately 1 Hz while applying the electrical signal.

36-38. (Cancelled)

39. (Previously Presented) A method comprising:

determining that ventricular fibrillation is occurring in a heart of a person; and

defibrillating the heart without applying shock pulses by:

applying an electrical signal to the heart with a total energy of no more than about 1 joule, and

terminating the electrical signal, whereby the steps of applying and terminating the electrical signal effectuate defibrillation of the heart,

wherein applying the signal comprises applying respective signals at a plurality of sites on the heart, and

wherein applying the signals comprises applying a first waveform at a first one of the sites and applying a second waveform, which differs from the first waveform, at a second one of the sites.

40-43. (Cancelled)

44. (Previously Presented) A method comprising:

determining that ventricular fibrillation is occurring in a heart of a person; and

defibrillating the heart without applying shock pulses by:

applying an electrical signal to the heart with a total energy of no more than about 1 joule, and

terminating the electrical signal, whereby the steps of applying and terminating the electrical signal effectuate defibrillation of the heart,

wherein applying the signal comprises applying to the heart electrical pulses at a first frequency, and

wherein terminating the electrical signal comprises reducing the frequency to a second frequency.

45-48. (Cancelled)

49. (Currently Amended) Apparatus for defibrillating a heart of a person, comprising:
one or more electrodes, adapted to be coupled to the heart;
a control unit, adapted to determine that fibrillation is occurring in the heart, and defibrillate the heart without applying shock pulses by:

driving the electrodes to apply electrical pulses to the heart at a rate greater than about 10 Hz, with a peak power that is less than about 100 W, wherein the control unit is adapted to drive at least one of the electrodes to apply a pulse having an amplitude less than about 50 mA, and

terminating the electrical pulses, whereby the applying and terminating of the electrical pulses effectuates defibrillation of the heart; and

a sensor, adapted to sense motion of the heart and to convey a sensor signal responsive thereto to the control unit, wherein the control unit is adapted to modify a characteristic of at least some of the pulses applied to the heart responsive to the sensor signal.

50. (Currently Amended) Apparatus for defibrillating a heart of a person, comprising:
one or more electrodes, adapted to be coupled to the heart;
a control unit, adapted to determine that fibrillation is occurring in the heart, and defibrillate the heart without applying shock pulses by:

driving the electrodes to apply electrical pulses to the heart at a rate greater than about 10 Hz, with a peak power that is less than about 100 W, wherein the control unit is adapted to drive at least one of the electrodes to apply a pulse having an amplitude less than about 50 mA, and

terminating the electrical pulses, whereby the applying and terminating of the electrical pulses effectuates defibrillation of the heart; and

a fencing electrode, adapted to be coupled to the heart, wherein the control unit is adapted to drive the fencing electrode to inhibit propagation of an activation wave in the heart, by applying a fencing signal to the heart, while concurrently driving the one or more electrodes to apply the electrical pulses.

51. (Cancelled)

52. (Currently Amended) Apparatus for defibrillating a heart of a person, comprising:
one or more electrodes, adapted to be coupled to the heart;

a control unit, adapted to determine that fibrillation is occurring in the heart, and
defibrillate the heart without applying shock pulses by:

driving the electrodes to apply electrical pulses to the heart at a rate greater than
about 10 Hz, with a peak power that is less than about 100 W, wherein the control unit is adapted
to drive at least one of the electrodes to apply a pulse having an amplitude less than about 50
mA, and

terminating the electrical pulses, whereby the applying and terminating of the
electrical pulses effectuates defibrillation of the heart; and

a pacing electrode, adapted to be coupled to the heart, wherein the control unit is adapted
to drive the pacing electrode to pace the heart at approximately 1 Hz, while concurrently driving
the one or more electrodes to apply the electrical pulses.

53. (Currently Amended) Apparatus for defibrillating a heart of a person, comprising:
one or more electrodes, adapted to be coupled to the heart; and

a control unit, adapted to determine that fibrillation is occurring in the heart, and
defibrillate the heart without applying shock pulses by:

driving the electrodes to apply electrical pulses to the heart at a rate greater than
about 10 Hz, with a peak power that is less than about 100 W, wherein the control unit is adapted
to drive at least one of the electrodes to apply a pulse having an amplitude less than about 50
mA, and

terminating the electrical pulses, whereby the applying and terminating of the
electrical pulses effectuates defibrillation of the heart,

wherein the one or more electrodes comprise first and second electrodes, and wherein the
control unit is adapted to drive the first electrode to apply a first waveform at a first site of the
heart, and is adapted to drive the second electrode to apply a second waveform, which differs
from the first waveform, at a second site of the heart.

54-85. (Cancelled)